

# OPTOLINQ **OLS-1211**Liquid epoxy encapsulant

- UV resistance
- Good anti blue
- Encapsulation of LED lamps and displays



**OPTOLINQ OLS-1211** is a two-component (Part A & Part B), low halogen, optically clear epoxy casting compound designed for the encapsulation of LED lamps and displays. Part A is an epoxy resin while part B is primarily a modified curing agent.

**OPTOLINQ OLS-1211** offers excellent bonding properties to a wide range of substrates and good resistance against heat aging, cold and thermal shock. Additionally, this epoxy encapsulant contains a release agent and features high transmittance and low light decay. It has much better UV resistance and antiblue properties than OLS1000.

**OPTOLINQ OLS-1211** has been developed for applications that will not be exposed to temperatures above 125°C. It has been used extensively for low-power LED encapsulation, automatic LED casting, and potting of large optoelectronic modules. It can be colored and diffused by the addition of specific dye and diffusing concentrates.

Property	Value	Unit	Method
Viscosity	1,100	Ср	100:100 Mix
Appearance	Lilaq liquid	-	-
Hardness	>85	Shore D	7619-1-2008
Tg	127	°C	11357-2-1999
Refractive index	1.52	-	ABBE
Work life	4	Hours	@25°C
Gel Time	125	Sec	-
Water absorption	0.3	%	1h @ 1atm

# **Process instructions**

We recommend to process the product in a clean room at room temperature with a relative humidity lower than 35%.

- 1. Preheat Part A to 50-55°C for 2 hours, making sure that you adjust this to the external temperature. Do not preheat for more that 24 hours
- 2. Mix part A with the diffusion agent and the pigment and stir well. Afterwards add Part B in a 100:100 ratio.
- 3. To ensure that all the entrapped air bubbles are removed after mixing, the mixture of Part A and B should be done in a vacuum and degassed at 0.1MPa for 10-15 minutes.
- 4. Clean and dry the glue injection tool. Use it within 90minutes in room temperature and under tightly sealed conditions, ideally in a vacuum.

# Europe

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## Curing

We recommend to process the product in a clean room at room temperature with a relative humidity lower than 35%.

It is advised to cure in two stages to reduce thermal stress.

- The mixture should be cured in the over within 30 minutes after dispensing.
- The over should be already preheated to the curing temperature.
- After the initial cure is finished the post curing should be carried out within 2 hours, ideally in the same oven.

## Reference Cure Schedule

- Φ3 | 1hour @ 130-135°C + 6-8hours @ 130-135°C
- Φ5 | 1hour @ 125-130°C + 6-8hours @ 130-135°C
- Ф8 | 1hour @ 105-120°С + 6-8hours @ 130-135°С

## **Using Additives**

Optoling OLS-1211 can be mixed with diffusing agents or color pastes to achieve customer-specific purposes.

Recommended quantity (by weight) of various diffusing agents and color pastes:

- OPC-R Red Color Paste: 0.1-0.5%
- OPC-B Blue Color Paste: 0.1-0.5%
- OPC-G Green Color Paste: 0.1-0.5%
- ODF-090 Diffusing Agent: 3-5% (LED lamps), 4-8% (LED displays)

For example, ODF mixture would be 100: 100: 3~5 for LED lamps

# Storage and packaging

OPTOLINQ OLS-1211 is supplied in 5Kg cans and should be kept in a cool and dry place (40% – 75% humidity) away from direct sunlight or temperature extremes. It should not contact any acid and alkali substances. Consult the Safety data sheet for the handling of this product

The product comes in fluorinated drums. Please keep it at 0-30° and use it within the shelf life .After the Can is opened, the unused product should avoid prolonged contact with air. Try to tightly seal the package to ensure its stable performance.

#### **Data Ranges**

The data contained herein are reported as typical values and/or range values based on actual test data and are verified on a periodic basis. They have been measured in a laboratory environment with a temperature of 25°C and 70%humidity. They are reference values and not guaranteed specifications.

# Shelf life @ 0-30°C

- Part A (Resin): 6 months
- Part B (Curing agent): 3 months

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